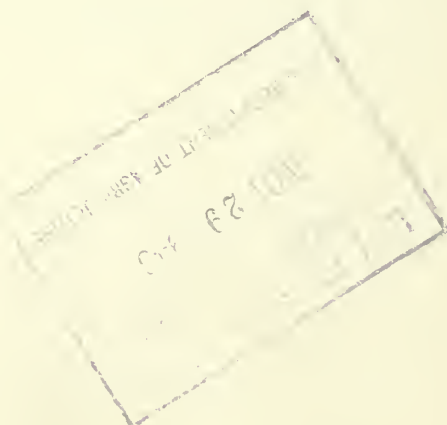


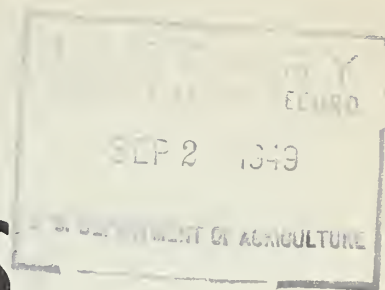
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# NUTRIAS GROW IN THE UNITED STATES



WILDLIFE      LEAFLET      319  
FISH AND WILDLIFE SERVICE  
UNITED STATES DEPARTMENT OF THE INTERIOR



COVER: Nutria in the Louisiana Marshes. Photo from  
Department of Wildlife and Fisheries, New Orleans, Louisiana.



United States Department of the Interior, J. A. Krug, Secretary  
Fish and Wildlife Service, Albert M. Day, Director

Wildlife Leaflet 319

Washington 25, D. C.

May 1949

NUTRIAS GROW IN THE UNITED STATES <sup>1/</sup>

By Frank G. Ashbrook, Fish and Wildlife Service  
United States Department of the Interior

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INTRODUCTION

The occurrence of nutria (Myocastor coypus), sometimes known as swamp beaver, South American beaver and coypu, in the catches of Louisiana trappers in recent years has been a source of great interest to managers of fur and game animals, fur tradesmen, and conservationists generally. The new source of fur has particularly encouraged those who are concerned with increasing fur production in the United States.

It is paradoxical that this new fur animal development was brought about by defeated and discouraged nutria breeders who released or permitted escape of these fur animals from captivity into the wild.

Raising nutrias has been of extensive interest and of speculation since ruthless hunting and uncontrolled trapping brought this animal to the verge of extinction in South America. Its history is a repetition of the chinchilla (Chinchilla laniger) and many other species of animals having an attractive fur that found favor with fashion and advanced in value as demand increased.

In 1849 nutrias were so abundant in all the rivers, estuaries, lagoons, and marsh lands of Argentina that Governor Rosas in his address before the Twenty-seventh Legislature of the Province of Buenos Aires

<sup>1/</sup> Permission to reprint this paper was granted by The Journal of Wildlife Management.

referred to them as "...constituting great wealth destined to reward the troops after the war..."

The nutria did reward the troops and many others so well for the following sixty years that those who lived by hunting and trapping this fur animal had virtually exterminated it and were forced into other pursuits for a livelihood.

Since then, protective laws were enacted, but this legislation was only partly effective in saving some of the nutrias that found refuge in isolated districts. The annual take of pelts decreased to where the demand was one hundred times that of the supply. So, when nutria pelt exports declined to an annual average of 175,600 for the five-year period 1924-28, breeding nutrias in captivity began.

Prices paid for nutria pelts took a sharp upward trend in 1922, but for some years before that the demand was far greater than the supply and the rise in prices caused the animals to dwindle in number. Skins reached \$70.00 a dozen in 1923 and soared to \$140.00 a dozen in 1924. By 1929 the price quoted on the Canadian raw fur market for extra-large skins was \$13.50 each.

As early as 1882, a few nutrias were raised in France and later (1890-92) the production of these animals became a private enterprise of amateurs. Nutria raising practically disappeared after the beginning of World War I, and it was not until 1925 and especially after 1927-28 that these fur animals were again raised extensively in captivity. Great hopes for financial success were unhappily ended as a result of the world economic crisis during the 1930's. Released or escaped nutrias occurred in several regions of France and in 1939 they benefited in the wild state by protection applying to other game (Bourdelle 1939).

Raising nutria in captivity in South America started in 1922. Nutria farms became numerous throughout the country and animals captured in the wild for breeding stock brought high prices. A hundred dollars a pair was not an unusual price. Early operations were small followed by a "boom," and as usual with a promise of large fortunes.

Germany, Switzerland, and France entered the industry importing nutrias from Argentina, and later the United States and Canada, followed by Russia and the Scandinavian and other European countries. All had a measure of success in raising breeding stock and selling the animals to others who desired to engage in the same enterprise. By 1928 Germany had a nutria population of about 3,000 on some 200 farms. The "boom" in Europe stimulated breeders in the United States and Canada but it did not last long and not many nutria farms were established, despite its big play in United States fur-farming periodicals and press. The first nutrias known to be born in North America were those on the La Forrest Fur Farm, Quebec, Canada 1931.



## NUTRIAS IN CAPTIVITY

In South America, the first nutria farms were large, fenced enclosures which included as much natural habitat as possible. Later on larger and more pretentious areas were fenced and partitioned into smaller areas for breeding and whelping, retaining pens, and feeding ranges where corn, clover, and alfalfa were planted. When the crops were ready the nutrias were turned in to do their own harvesting. The next development was to house the nutrias in small pens where they were under control similar to silver foxes.

When the first shipments of pelts from nutrias raised in captivity arrived in the raw fur markets, nutria farming began to decline. The size and quality of these skins were so inferior to those taken in the wild, and the prices received for the fur were so disappointing that many breeders abandoned the venture immediately and others followed gradually. So ardent and persistent had been the pursuit of the animal for the monetary value of its fur that little or no time was devoted to a study of its life history or habits. Breeders soon began to realize that much serious study and experimental work was necessary before a profitable business could be developed. Very few had the courage to undertake the task.

Some nutria farms continued but they were conducted mainly as centers of redistribution, and the principal business of these so-called nutria farms was to hold animals taken in the wild for exportation as breeding stock.

Experimental nutria farming in Argentina extended over a period of 15 years and proved a costly undertaking to those who set out to raise nutria in captivity. They learned reluctantly that more money was spent in equipment, feed, and labor than could be realized from the sale of the fur.

By 1940, practically all the nutria farms in South America, Europe, and the United States had discontinued business, but a few continued on a shoestring basis. Some of the breeders in the United States became so disgusted that they turned the nutrias loose or allowed them to escape into the wild so as to preclude feeding and caring for them.

## IMPORTS, RELEASES, AND ESCAPES

The earliest record of nutrias imported to the United States was in 1899. Will Frakes brought from South America, one mature male and three young female nutrias to Elizabeth Lake, California. The late David Starr Jordan and C. Hart Merriam encouraged this venture. Frakes kept them in small pens for two years but no young were produced and there is no datum available reporting his experiences with these fur animals. As a matter of record Frakes did send a specimen to the National Museum, Washington, D. C. in 1900.

A nutria farm was established in the Green River area of Washington about 1932. An unprecedented flood swept this area in 1935 and floating logs punctured the woven wire fences enclosing the nutrias and they escaped into the wild. A pair of nutrias from the Green River farm was given to another enthusiast who desired to raise these fur animals in this same period but, having no success, liberated them. Still another nutria farmer, located on the south end of Lake Washington near the town of Renton, had seven nutrias in captivity and tried for seven years to raise them. After Pearl Harbor he was drafted, but before he joined the armed forces he tried to sell them. He failed and in desperation turned them out into the marsh areas adjoining his farm.

From these escapes and releases the nutria became established not only in the Lake Washington region but in areas drained by the Snohomish and Skykomish rivers and their tributaries. It has travelled up the Cascade range to the headwaters of the Snoqualmie River about 60 miles from the town of Renton. Some woodsmen have reported seeing nutrias on the east slope of the Snoqualmie Pass. If this is true, they may migrate to the headwaters of the Yakima River where they could do damage to storage reservoirs and to irrigation projects in the lower valley.

Larrison (1943) reports colonies of nutrias near Garrison Lake, Nestucca River and Portland, Oregon; also near Sammamish River in the vicinity of Seattle and the La Conner and Fine Lakes areas in Washington. The earliest trapping record for nutria in Oregon appears to be 1938 and in Washington 1941.

In 1937 E. A. McIlhenny established a nutria farm on Avery Island, Iberia Parish, Louisiana. The animals were kept in an area fenced by driving boards side by side into the marsh. About 1939 some of the animals escaped and during the same year 50 or more pairs were released. They took refuge in the marsh areas surrounding the island. Lowery states that McIlhenny reported (Lowery, 1943, p.248) that trappers took nutrias in Iberia Parish, and that he heard of others being captured at Morgan City, Marsh Islands, Chenier au Tigre, Pecan Island, Lake Arthur, and in the marsh along the Sabine River near Toomy. Atwood (unpublished) reports that during September 1940 he found the first nutria in the Lake Arthur area, sixty-five miles by water from Avery Island. These took refuge in the marsh areas surrounding the island. In Louisiana, where the waterways are a network of rivers, lakes, bayous, and marshes, traversed in part by an intercoastal canal, the nutria had no difficulty in extending its range.

Nutrias were first trapped on the Sabine National Wildlife Refuge during the season 1941-42 and on Laccasine in the winter of 1943; both Federal refuges are located in Cameron Parish.

At the close of the 1945-46 trapping season Atwood (unpublished) states that nutrias extended their range westward as far as White Ranch, 15 miles west of Port Arthur, Texas and eastward as far as the west





Figure 1.-- Nutria shelters of marsh hay located on the canal bank, McIlhenny nutria farm, Louisiana



Figure 2.-- A floating nutria house or nest built on a lagoon in South America

bank of the lower Mississippi River. By 1947 this exotic travelled east and south as far as the Delta at the mouth of the Mississippi River, for during January 1947 colonies of nutrias were found on the Delta National Wildlife Refuge. They migrated west to the Texas border and across the state line into the marsh areas along the Gulf of Mexico.

Nutrias in Louisiana are now established in the parishes of Iberia, Vermillion, Cameron, St. Marys, and Plaquemines. They have reproduced in such an extent since their release in 1940, that the state collected a severance tax on 8,784 such pelts during the trapping season 1945-46, and 18,015 in 1946-47. The marsh areas of Louisiana are capable of supporting large numbers of muskrats and nutrias which will undoubtedly increase the fur production in that state.

In 1939 nutrias were discovered on the Bitter Lakes National Wildlife Refuge, New Mexico. Prior to the acquisition of this land by the Federal Government, a nutria farm was established in the region near the Pecos River. Later a flood swept the nutrias down the river and those that survived established colonies on the refuge. The existing habitat is patchy, limited, and the food and cover is not the type particularly attractive to nutrias. Therefore, this fur animal has not reproduced in any appreciable numbers during the past eight years. It is estimated, however, that approximately 150 of them are now living on the refuge. Petrides (1946) reports the first nutria taken in Ohio was killed in a barn located at Whitehouse, Lucas County. It was eating corn with the pigs. Dr. William H. Burt of the University of Michigan has received several sight records of nutrias in Michigan. Harlan (1943) reports two young muskrat trappers in Iowa captured a strange animal later identified as a nutria. Presumably this animal escaped from a fur farm.

Releases and escapes of nutrias were undoubtedly made in other states for there are unconfirmed reports that indicate this to be the case. At first, trappers did not know what they were. They said they looked like a cross between a muskrat and a beaver but grunted like a hog. After much speculation and investigation all these appeared to be nutrias. How many were released and later trapped, is not known. Nor are there any data available on the number now at large. It seems reasonably certain, however, that this exotic fur animal is pretty well established in the States of Washington, Louisiana, and Texas for they are being trapped and the furs sold in commercial quantities in these States.

Scattered records of nutria taken in Western Canada have been recorded but these are difficult to verify. These animals undoubtedly escaped or were released from fur farms.



## DESCRIPTION AND CHARACTERISTICS

Because the early Spaniards believed this fur animal to be a form of European otter, they gave it the name "nutria." The word nutria is Spanish for otter. In more recent years the animal has come to be known as the South American Beaver. Both terms, however, are misnomers.

According to Osgood (1943) the coypu has five recognized geographical races which together have an extensive natural range in southern South America. The species occurs in coastal areas and in larger rivers from approximately 15° South latitude in southern Brazil, Paraguay, and Bolivia to the Pacific coast of Tierra del Fuego. The coypu subspecies in Louisiana and Texas is probably *M. c. bonariensis*, the form from North Argentina, Uruguay, Paraguay, and South Brazil (Lowery, op.cit.).

On first sight a nutria on land looks like a stunted beaver with a long round tail, clumsy and possessing an unsightly fur covering. The head is typical of a rodent and resembles a guinea pig or an agouti.

It possesses four powerful incisors, orange in color and deeply set. The color of the incisors become deeper red-orange with age, giving the animal an odd characteristic appearance. It has powerful cheek muscles like the beaver. The nutria can inflict serious wounds with these teeth and can cut off a handler's thumb or finger in one snap of the powerful jaws. The only safe way to lift a specimen is by the tail, holding it a safe distance from the body.

The short, round ears and the long whiskers around the mouth make the head look broad, heavy, and coarse. The neck is short and the body broad with heavy covering of fur. The front legs are small, short, and have strong claws. The hind legs are longer, well muscled and the feet are webbed for swimming. The nutria's legs are scarcely long enough to keep the proportionately large body off the ground, giving it a clumsy appearance when in motion. When disturbed or excited it moves rapidly in short hops. The tail is black, long, perfectly round, and thinly covered with flat-lying bristles. The tail serves as a rudder when the nutria is swimming.

A full-grown male weighs from 20 to 25 pounds and a female from 15 to 20 pounds. The body is about 24 inches long and the tail 12 to 16 inches. The male can generally be distinguished from the female because he is larger and stronger in body, and the head and neck are coarser than those of the female. In the female the mammary glands are well developed but they are located along the side of the back. The first of these is located at the height of the elbow of the fore-leg where the back begins to flatten down to the sides. On the height of the hip bone the last mammary gland is located. It seems to be generally accepted that this arrangement gives the young an opportunity to suckle while the mother is in the water. The irregular position of the mammary glands in the Rodentia is, however, not unusual. The



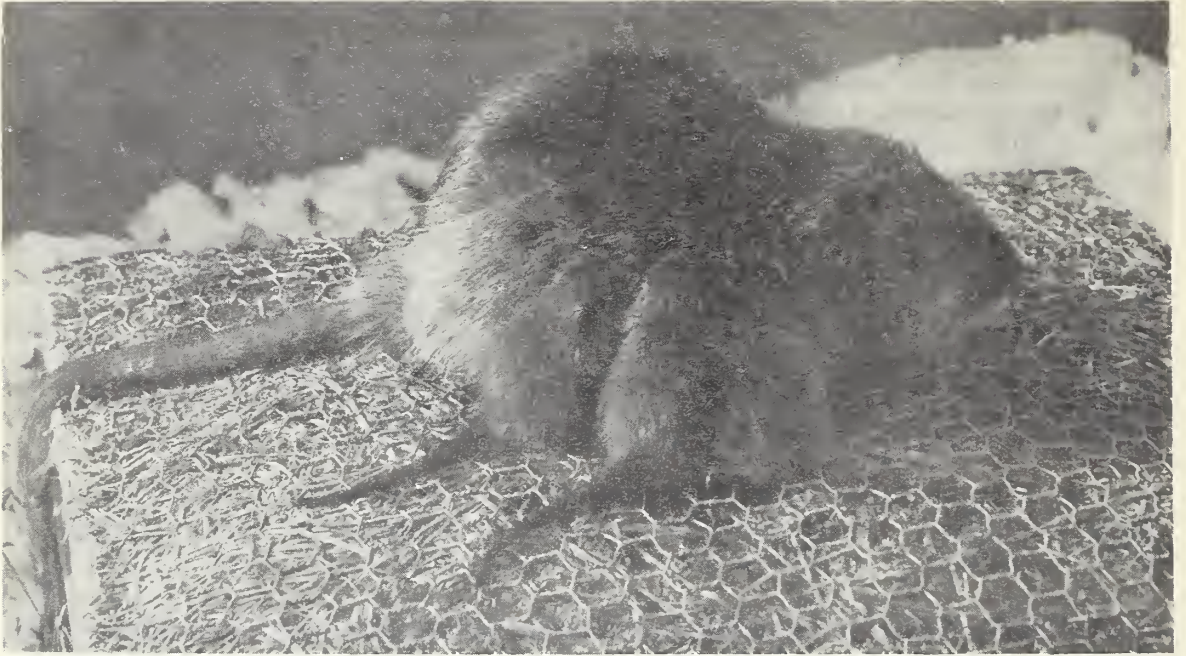


Figure 3.-- Young nutrias nursing in pen. Fur Animal Station, Cambridge, Maryland



Figure 4.-- Proper method of holding and carrying nutrias.  
(Courtesy of U. S. Department of State.)

guinea-pig and some species of Capromys have mammary glands on the inside of the hind legs. The porcupine has them above the arm pits and other rodents have them located similar to the nutria.

The common color of the nutria is dark amber in appearance but this varies with the type, season, and locality. The guard hairs are finer and not so long on the belly and sides as on the back and the under fur is also finer and denser.

The areas in South America inhabited by nutrias lie within a mild temperate zone where the winters last only three to four months, although hard freezes are not uncommon. The climate in these areas is similar to that in the United States but it is a marine climate and less fluctuating.

In the southern parts of Argentina and Chile the winters are quite severe. Streams freeze early in the season and remain frozen for a considerable period. The nutria is still fairly common in the Territories of Neuquen, Chubut, Rio Negro, and Santa Cruz, all within the extreme cold winter section of Argentine Patagonia and it is from these territories that the best nutria fur is produced for export trade to the foreign fur markets of the world.

The nutria takes readily to icy water throughout the Patagonian winters and apparently experiences no ill effect other than losing part of its tail. This is not common in all parts of South America and, since the animals so affected recover rapidly, the loss is considered inconsequential.

Nutrias in South America have been observed running over the ice of frozen rivers and lakes in search of a water opening into which to plunge and swim about. The young nutria a few days old is said to follow the mother into the same icy waters.

When nutrias were kept in captivity out of doors in Canada and in the Northern United States, the tails and feet of these fur animals froze and the condition was serious and a handicap to production.

#### FEEDING HABITS

The nutria is strictly herbivorous and feeds on a wide variety of succulent green plants, rushes, seeds, sour grasses, and aquatic plant roots. It is not too particular in selecting a menu. In captivity it shows a marked preference for alfalfa and clover and is fond of practically all root crops except white or Irish potatoes. In the marsh areas of Louisiana where the nutria is established it feeds extensively on the coarser vegetation, which it seems to prefer. Further study of the feeding habits of this exotic in the United States is required to determine the various species of aquatic vegetation that compose the diet of this fur animal. Even in waters well stocked with fish, the nutria has never been observed eating them. Neither has this fur animal shown a tendency to molest the nests or eat the eggs of birds or waterfowl nesting in the same area.



The natural habitat of the nutria is along banks of fresh water streams, ponds, and lakes; also marsh areas having an abundance of aquatic plants. They may burrow into banks close to the water level. Each pair makes its own burrow. They work in and up until well above the water level, clear a space and deposit grasses. As the family grows the burrow is enlarged since the offspring from one pair continues to live in the same burrow. If such a site is left undisturbed, in time it becomes the home of a large colony. As long as the water supply is sufficient and the feed plentiful the colony of nutrias will remain in the same locality for a long time.

A colony of nutrias may select a site in a marsh that has an abundance of weeds and rushes but which lacks banks. Here floating nests will be constructed of aquatic plants much after the same manner as the muskrats employ. Where natural conditions are favorable, part of the colony may make burrows in the ground and the other part will live in nests built in the marsh.

#### BREEDING AND REPRODUCTION

The breeding habits of the nutria are not so well known as those of the muskrat and some other rodents. The age at which a female will accept the male seems to be about 8 months, but very few females become pregnant at this age. The heat period lasts from 2 to 4 days. Females bred at the age of 12 or 16 months are more likely to produce young successfully. The gestation period is 130 to 150 days. At the U.S. Fur Animal Field Station, Cambridge, Maryland, the gestation period was found to be 130 to 135 days. In the case of young females that give birth to young for the first time the period of gestation seems to be less (100 to 125 days) than for those that are suckling a litter and developing another at the same time. The young seem to be born through all the seasons and it is estimated that two or three litters are possible during the year. The number of young in a litter varies from two to eight. Young females seem to produce smaller litters than older ones. The general average seems to be about 5. The young are born with a good coat of fur and at birth are in an advanced state of development. In a few hours they are able to get about and after a few days they move around quite rapidly. They will leave the nest for short periods and scurry about with the mother. The young also begin to eat small quantities of solid food the first and second week after birth. The young are weaned at the age of seven or eight weeks.

#### TRAPPING AND PREPARING PELTS

Nutrias are trapped similarly to muskrats and the same types of steel traps are used. A trap set for a nutria must, however, be staked out more securely than one for a muskrat because the nutria, being much stronger, will pull the stake and drag off the trap. Traps commonly used to catch muskrats are not entirely satisfactory for trapping nutrias. Larger traps designed for other fur animals such as number 1-1/2, 2, or 3, are not suitable because the jaws and spread are too large, spring tension is too strong and



the weight required to spring these traps is too great; therefore they are not adaptable for catching and holding nutrias. A new type of trap is required and experiments are in progress to develop a satisfactory trap for nutrias.

In Louisiana and Washington where nutrias occur in the wild, the trapping season is the same as that for muskrats. The best season for taking nutrias in the United States has not yet been established. It may be late winter and early spring. In South America, however, the mid-winter season is July through August.

The pelt of the nutria is taken "cased" and dried fur side in, similar to the otter and muskrat. A slit is made along the hind legs to the anus just as in the muskrat and the skins are pulled off in the same manner. The pelt is then drawn on a stretching board or frame, the average size of which is 35 inches long. It is tapered from the bottom which is 5 to 6 inches wide, to 4 inches wide at a distance 4-1/2 inches from the top. The balance of the board should be tapered to a rounded tip. The skin is then drawn gently over the board, fur side in, and stretched lengthwise and tacked at the bottom. From then on it is handled the same as the pelt of an otter or muskrat.

The fur trade knows the pelt of the coypu or swamp beaver as "Nutria" and the fur is judged by the condition, quality, and color of the under fur the same as beaver, otter and muskrat. The color and density of the guard hairs mean little to the fur tradesman for they are removed when the skins are dressed. Nutria pelts are the only skins which are slit open along the back during the processing. The reason is that the fur on the belly and sides is denser and of better quality than on the back.

The under fur should be dark and of a bluish-grey cast. The best pelts are called "blue" by the trade as some natural muskrats are called "black" but these designations should not be taken literally. Reddish or rusty under fur is undesirable. Density is extremely important.

The prevailing prices now being paid for South American nutria pelts taken in the wild are from \$8.00 to \$9.00 each for top quality skins 30 to 35 inches and longer. Nutria furs trapped in Louisiana during the season 1947 sold for 1.50 to \$2.00. The assortment of nutrias trapped in Louisiana varies greatly in size, shape and general appearance. Trappers have not yet learned the proper method of pelting, stretching, and preparing nutria furs for the raw fur market. There are too many small skins measuring 21 inches and less from the eye hole to the bottom of the skin. Such nutria pelts have practically no commercial value and it is unprofitable to pelt and market such skins. The same is true of cut or punctured skins because this damage multiplies many times in processing the pelt.

## NUTRIA FLESH AS FOOD

The meat of the nutria, when properly prepared, has a pleasing flavor and is excellent eating. Those who are fond of the meat hold it in high esteem, and prefer it to rabbit and hare. They claim nutria is a common article of diet in some districts, just as muskrat is in the United States. When roasted it is similar to suckling pig.

Farmers in South America relish roasted nutria and during the killing season prefer it to other meat. It has also been served in restaurants in Buenos Aires. The average dressed weight is from 8 to 9 pounds. The flesh of the nutria is light pink and on exposure to the air it becomes somewhat darker. It presents a palatable appearance when cooked and does not turn black when prepared by certain methods as in the case of muskrat.

Generally speaking, any areas where muskrats thrive are equally suitable for nutrias. Those having an abundance of water and a natural growth of perennial vegetation are ideal habitats. There are extensive well-watered lands in the United States with dense growth of aquatic vegetation where nutrias would thrive and in a comparatively short time increase the fur production of this country.

## ACKNOWLEDGMENT

The author is especially grateful to American Consuls stationed in South America who reported to the State Department on nutria production and markets for the fur. Particular thanks are due South American Government officials stationed in Washington, D. C. who gave first-hand information and written reports on nutria developments; to Herbert L. Dozier whose reports on nutria production, U.S. Animal Field Station, Cambridge, Maryland have been most helpful; to managers of Federal Refuges where nutrias are established, for their information; to Armand P. Daspit, Director, Division of Fur and Refuges, Department of Wild Life and Fisheries, Louisiana and B. T. McCauley, former Director of Game, Washington State Game Commission for their information on nutria production and developments in Louisiana and Washington. Sincere thanks are due Colin C. Sanborn of the Chicago Museum of Natural History for his advice on species; Gustav A Swanson, Harley H. T. Jackson, W. S. Bourn, Lee E. Yeager and R. E. Griffith of the Fish and Wildlife Service for critical review of this manuscript.

## LITERATURE CITED

- ATWOOD, EARL.  
(1947). Unpublished ms.
- BOUDELLE, E.  
1939. American mammals introduced into France in the contemporary period, especially *Myoscaster* and *Ondatra*. *Journ. Mammal.*, 20 (3):287-291.
- HARLAN, JAMES R.  
1943. Iowa trappers catch South American Coypu or Nutria. Iowa State Cons. Comm., Cons. Notes, Jan. 7 (Mimeographed).
- LARRISON, EARL L.  
1943. Feral Coypus in the Pacific Northwest. *Murrelet*, 24 (1): 3-9, 1 fig.
- LOWERY, GEORGE H.  
1943. Mammals of Louisiana and adjacent waters. La. State Univ., Occ. Papers Mus. Zool. 13:213-257.
- OSGOOD, WILFRED H.  
1943. The mammals of Chile. *Field Mus. Nat. Hist., Zool. Ser.*, 30(5,42):131-134.
- PETRIDES, GEORGE A.  
The nutria in Ohio. (In press.)

## ADDITIONAL REFERENCES

- BEISTEIN, J. H.  
1941. Nutria. *Amer. Fur Breeder*, Oct., pp. 32-34.
- FEDERSPEIL, M. N.  
1942. Successful nutria raising at the Rohshor ranch. *Amer. Fur Breeder*, April, p. 12; May, p. 20.  
1942. Winter care of nutria. *Amer. Fur Breeder*, Dec., p. 18.
- HANNA, L. W.  
1942. Coypu breeding and fur farming, Del Norte, Colo. (Privately printed.)
- HARDES, W. W.  
1940. Nutria - the amphibian. *Amer. Fur Breeder*, March, pp. 14-15.



- LANGE, W.  
1939. Erfahrungen mit verschiedenen Zuchtverfahren beim Sumpfbiber. (Experiences with different methods of breeding nutria). Dtsch. Pelztierz. 14 73-76, 3 figs.
- MERRELL, C. C.  
1942. Coypu (nutria) raising. National Fur News, May, p. 6.
- PARTIK, C. R.  
1937. Feeding nutria. Black Fox Mag., Nov., p. 24.
- PREDMORE, POLLY.  
1939. The nutria - nature's riddle. Amer. Fur Breeder, Aug., p. 6.
- RICHARDS, G. T.  
1944. Nutria raising. Fur Trade Journ. of Canada, Sept., p. 16.
- SCHOEMANN, B.  
1932. Practical experience to prevent losses in nutria raising. Black Fox Mag., July, p. 16.
- SJOSTROM, L.  
1939. Some experiments in breeding nutria. Vara Palsdjur., Stockholm, Sweden. No. 14, pp. 333-338.
- TANZER, ALBERT.  
1932. Nutria breeding. Argentina Nutria Farms, Inc., New York. 23 pp.
- TWAIITS, WALTER G.  
1947. Nutria raising, National Fur News, June, pp. 10-11, 25.
- VON HEIN, G.  
1939. Wie soll eine Sumpfbiberzucht auf Fellbasis aufgebaut sein? (How should swamp beaver (nutria) breeding be build up on a fur basis?). Dtsch. Pelztierz. 14:37.
- WALTHER, A. R.  
1931. The South-American swamp beaver (nutria). F. C. Mayer, Munich. 128 pp. (English translation by C. R. Partik, Lantier, Que. This book contains extensive bibliography on subject.)



